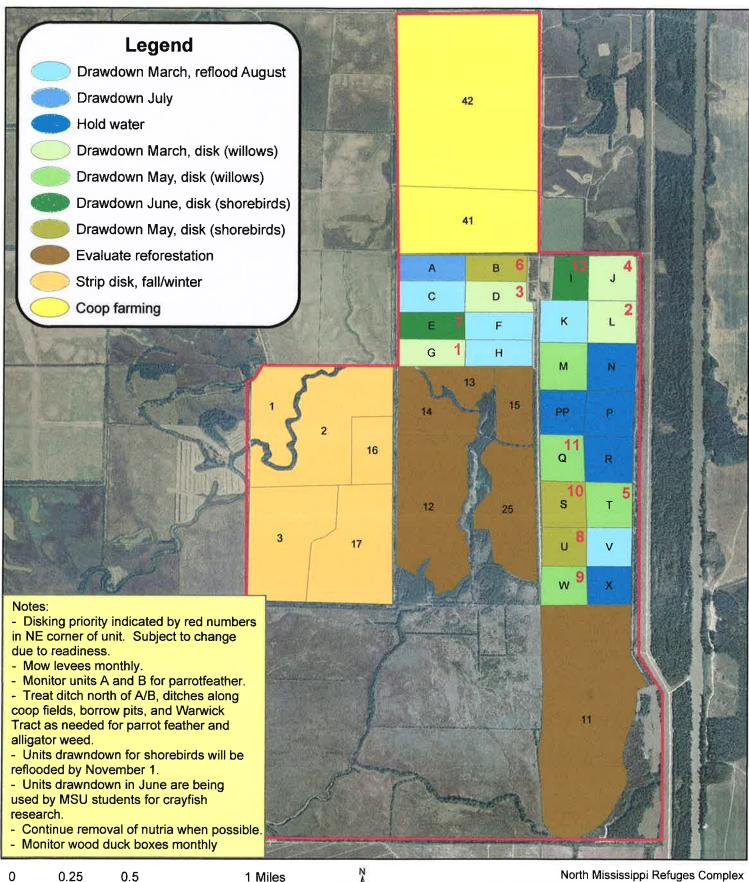
Coldwater River National Wildlife Refuge Annual Habitat Work Plan - 2011





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Pond A	16	Fall migrating shorebirds	Provide 225 acres of fall foraging habitat for migrating shorebirds	Slash piles and dead willows largely deteriorated. Little to no flooded vegetation.	Hold water until July. Begin slow drawdown and allow to evaporate. Flush as needed to maintain mudifal/shellow water conditions	PUP (parrotfeather)	Began drawdown 7/15 with additional board pulled 8/24. Unable to drawdown as desired due to backflowing from ditch. Stand of aprangletop around edges, but no significant vegetation response	Used during drawdown primarily by long- legged waders. Duck response good, beginning in October. Some shorebird use at that time as well.		
Pond B	14	Wintering dabbling ducke/Fall migrating shorebirds	Provide 190 acres of moist-soil habitet for over-wintering waterfow//Provide 225 acres of fall foraging habitet for migrating shorebirds	Disked in '08, Dense vegetation remaining from '10 growing season.	Late drawdown (begin May 1, dry by June 1). Disk, reflood, then drawdown for fall shorebirds. Reflood by Nov. 1	PUP (parrotteather)	Began drawdown 5/24_ Unit nearly dry by 6/23 (only small pool remained). Unit	Immediata response following flooding by narrownouth toads and bronze frogs (calling). Minimal response by waterfowl through 32/1/11		
Pond C	20	Wintering debbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in '10. Mud flat (and potential for cockdebur).	Drawdown slowly early (begin March 1). Flood vegetation in mid-late August for migrating rails and waterfowl Treet with 2,4-d as needed for coffeeweed or cockleburr.	PUP	Began drawdown 3/2. Unit dry at wes by 5/31, but large pool still remained. Dry by 6/23 Mowee portions to control coffeeweed and cocklebur. Good stand of smartweed along edges and center lower area with sedges and sprangletop. Refloaded 10/177			
Pond D	18	Wintering debbling ducks	Provide 190 scres of moist-soil habitat for over-wintering waterfowl	Disked in '09, but some willow persist. Dense vegetation present from '10	Drawdown early (begin March 1, dry NLT May 1). Disk, dry for 2 weeks, reflood and hold water through fall and winter.	N/A	Began drawdown 3/30. Still retained small pool brough 6/23. Unit disked 8/10. Reflooded on 8/19. Began drawdown for shorebirds on 9/8 Reflooded by rainwater 11/28.	Small response by shorebirds to late drawdown, but excellent response by ducke (esp. BWTE) to shallow water/mud conditions.		÷
Pond E	16	Wintering dabbling ducks/Fall migreting shorobirds	Provide 190 acres of moist-self habitat for over-wintering waterfow//Provide 225 acres of fall foraging habitat for migrating shorebirds.	Disked in '08 Dense vegetation remelning from '10 growing season. Herbicide treatment in 2010	Late drawdown (Hold through June for crayfish research) Disk, reflood, then drawdown for full shorebirds Reflood by Nov. 1	N/A	Held water throughout season. Slowly evaporated, but never completely dried. Domanated by lofus and willow. Flushed in September?, just to add a little water. Reflooded 10/28.	Use by small numbers of ducks, waders and some shorebirds throughout the year. Excellent response beginning in Novembel (once flooded).	Needs to be disked in 2012 to set beck willows and open up tobus.	
Pond F	17	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in 2010	Drawdown slowly early (begin March 1). Flood vegetation in mid-late August for migrating rails and waterfowl. Treat with 2,4-d as needed for coffeeweed or cockleburr.	PUP	Began drawdown 3/2. Issues with backflow from ditch, Unit dry at wcs, but pool remained on 6/3. Unit mowed on 8/21? To control coffeeweed. Good smartweed over approximately 1/3 o unit. Reflooded on 8/22.	Some use by shorebirds and waterfowl during early stage of drawdown. Some usage during fall migration. Good		
Pond G	16	Winter dabbling ducks	Provide 190 acres of moist-sail habitat for over-wintering waterfowl	Disked in '08. Held water through '09. Dense vegetation remains from 2010	Drawdown late (begin May 1, dry NLT June 1). Disk, dry for 2 weeks, reflood, hold water through fall/winter.	N/A	Began drawdown 3/30 Dry at wes bu still small pool through 6/23. Unit completely disked by 8/10. Reflooded 8/19. Shorebird drawdown began 8/8. Bacopa present through much of unit.	CONTROL OF THE PARTY OF THE PAR		
Pond H	17	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in '10. Patential for cocklebur.	Drawdown slowly early (begin March 1). Flood vegetation in mid-late August for migrating rails and waterflow. Treat with 2,4-d as needed for coffeeweed or cockleburr.	N/A	Began drawdown 3/2. Mowed to set back coffeeweed. Smartweed present in narrow band along edges, sedge present in low areas (did get mowed). Gresses and sedge responded to coffeeweed mowing and seeded. Reßooded 10/28	Good response by shorebirds to early drawdown Good		
Pond i	14	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Bottom needs to be smoothed. Disked in part in '10	Late drawdown (Hold through June for crayfish research). Disk, reflood, then drawdown for fall shorebirds. Reflood by Nov. 1	N/A	Began drawdown or 7/15 for shorebirds, Heavy growth of coffeeweed over high ground In unit (approx. 1/2 of area). Reflooded beginning 10/28	100000000000000000000000000000000000000		
Pond J	20	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in '09. Dense vegetation remains from '10. Issues with Bermudegrass. Portions of unit won't dry.	Drawdown early (begin March 1, dry NLT May 1). Disk, dry for 2 weeks, then reflood and hold water through fall/winter	N/A	Began drawdown 3/30. Unit dry by 6/23. Approximatel 2/3 of unit in coffeewed. Mowe- on 9/8. Unit reflooded 10/13. Vegetation overall ok.			
Pond K	18	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in 2010.	Drawdown slowly early (begin March 1). Flood vegetation in mid-late August for migrating relis and waterfowl. Treat with 2,4-d as needed for coffeeweed or cockleburr.	PUP	Began drawdown 3/2. Dry by 5/18. Good stand of millel and smartweed developed. Some coffeeweed, particularly slong edges, mowed in fate summer. Began reflooding 10/28.			

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Pand L	16	Wintering dabbling ducks	Provide 190 acres of moist-soil hubitst far over-wintering waterfowl	Disked in '08, Dense flooded vegetation, Willows present	Orawdown early (begin March 1, dry NLT May 1), Disk, dry for 2 weeks, then reflood and hold water through fall/winter	N/A	8/15	Duck use (spring migrants) good Excellent waterfow) response beginning 11/14		
Pand M	21	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked '08. Coffeeweed mowed in '09. May dry through evaporation before May 1. Coffeeweed and grasses present.	(begin May 1, dry by	N/A	Began drawdown 5/18, Dry by 6/23. Coffeeweed stand developed, but low growing, Mowed prior to 9/8 and replaced boards. Unit flooded by rainwater by mid- December.	Late flooding resulted in no response initially. Good response by January.	Continue to monitor for willow. If Disking not necessary, try to hold water to keep out coffeeweed	
Pond N/O	20	Secretive Marshbirds	Emergent marsh	Need to smooth bottom and level old levee in center. Some willow encroachment and baccharis.	Hold water as long as possible, to see if any submerged aquatic vegetation responds. Disk if dries. Mow/disk vegetation on old levee (separating N and O)	N/A	Held water throughout season		Need to smooth bottom and level old levee in center. Some willow encroachment and baccharis.	
Pond PP	17	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Bottoms need to be smoothed. Willows prevalent in unit.	Hold water to see if any submerged aquatic vegetation responds	N/A	Held water throughout season	Consistently held mallards, white-fronted geese also later in season.	Bottoms need to be smoothed Willows prevalent in unit	
Pond P	20	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Bottoms need to be smoothed. Willow and buttonbush over 50% of unit	Hold water to see if any submerged aquatic vegetation responds. Disk edges if dries	N/A	Held water	Excellent response by BWTE early. Overall good response, atthough not as good as previous years	Bottoms need to be smoothed. Willow and buttonbush over 50% of unit	
Pond Q	18	Wintering dabbling ducks, spring migrating shorebirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in '07 Ultrablazer applied '08	Drawdown late (begin May 1, dry NLT June 1). Disk, dry for 2 weeks, reflood, hold water through fall/winter.	N/A	Began drawdown 5/18. Nearly dry by 6/23. Cockleburr common throughout. Unit disked 7/14, reflooded beginning 6/8. Held water for remainder of year. Coffeeweed in upper 1/3 of unit, but remainder in flooded grasses	Excellent waterfowl response	Few large willows still remain.	
Pand R	21	Secretive Marshbirds		Diverse assemblage of emergent vegetation. Approximately 50% of area covered by willow (Salix nigra) and groundsel-tree (Baccharis hallmifolie)	Hold water to see if any submerged aquatic vegetation responds.	N/A	Held water throughout season, aithough largely dry by fall.	Very little use by waterfowl recorded	Approximately 50% of area covered by willow and Baccharis	
Pond S	18)	Wintering debbling ducks, spring migrating shorebirds, fall migraling shorebirds	Provide 100 acres of moist-soil habitat for over-wintering waterfrow). Provide 225 acres of fall foraging habitat for migrating shorebirds	Ultrablazer applied '08. Disked in '09.	Late drawdown (begin May 1, dry by June 1). Disk, reflood, then drawdown for fall shorebirds. Reflood by Nov. 1	N/A	Began drawdown 5/18, Unit nearly dry by 6/23. Unit disked 7/18. Reflooded 6/8, Unit flushed 9/13 and 10/13 to by to continue to provide habitat for shorebirds	Good response by ducks and libis in response to initial flooding. Good use by snipe throughout winter. Excellent response by ducks throughout winter.		
Pond T	19	Wintering dabbling ducks	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Slash piles present. Willow grove cut in '07. Some resprouting. Disked in '08.	Drawdown late (begin May 1, dry NLT June 1). Disk, dry for 2 weeks, reflood, hold water through fall/winter.	PUP	Began drawdown 5/18. Unit dry by 6/23. Unit disked in 7/19, reflooded 8/10.	Unit likely used for nesting by red-winged blackbirds. Excellent response by waterfowl		
Pond U		Wintering dabbling ducks, fall migrating shorebirds	Provide 190 acres of moist-soll habitat for over-wintering waterfowl	Disked in '08. Dense vegetation from 2010	Late drewdown (begin May 1, dry by June 1). Disk, reflood, then drawdown for fall shorebirds. Reflood by Nov. 1	N/A	Began drawdown 5/18 Unit dry by 6/23. Unit disked 7/13 and reflooded 7/22. Low gresses and sagittarius present	Use by waterfowl lower		
² ond V	16	Wintering dabbling ducks, spring migrating shorabirds	Provide 190 acres of moist-soil habitat for over-wintering waterfowl	Disked in 2010	Drawdown slowly early (begin March 1). Flood vegetation in mid-late August	PUP	Began drawdown 3/2 Nearly dry by 5/31. Heavy growth of vegelation, grasses and others, Reflooded 9/8.	Excellent response by BWTE early. Overall excellent response, although difficult to count due to heavy vegetation.		
Pand W	15	Wintering dabbling ducks, spring migrating shorablirds		Disked '08 Some small willow patches remain.	Drawdown late (begin May 1, dry NLT June 1). Disk, dry for 2 weeks, reflood, hold water through fall/winter.	NIA	Began drawdown 5/18. Never completely dried (several pools persisted) Heavy growth of coffeeweed, Mowed majority of area in early September. Reflooded by rain in early winter.			
Pand X	15	Secretive Marsh birds	Emergent marsh	Diverse assemblage of emergent vegetation, Willows becoming denser.	Hold water to see if any submerged aquatic vegetation responds. Disk soft rush if dries enough.	N/A	Held water Ihroughout season Flushed with water	Poor use by waterfowl.		



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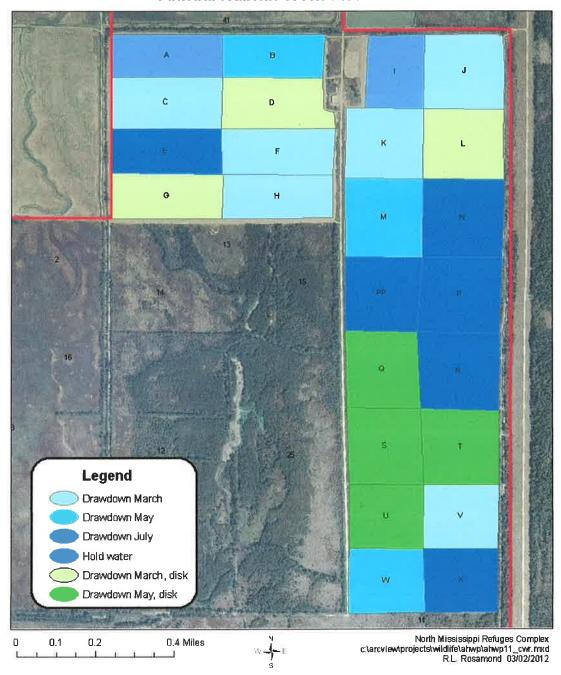


Figure xx: Annual habitat work plan for Coldwater River NWR